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09/213,856

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In re application of	:	Before the Examiner:
Scott A. Morgan et al.	:	Angela Armstrong
Serial No.: 09/213,856	:	Group Art Unit: 2654
Filed: December 17, 1998	:	Intellectual Property
Title: SPEECH COMMAND INPUT	:	Law Department - 4054
RECOGNITION SYSTEM FOR	:	International Business
INTERACTIVE COMPUTER DISPLAY	:	Machines Corporation
WITH INTERPRETATION OF	:	11400 Burnet Road
ANCILLARY RELEVANT SPEECH	:	Austin, Texas 78758
QUERY TERMS INTO COMMANDS	:	Date: January 16, 2003

BRIEF ON APPEAL

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

This is an Appeal from the Final Rejection of Claims 1-3, 5-8, 10-13, and 15 of this Application. An Appendix containing a copy of each of the Claims is attached.

I. Real Party in Interest

The real party in interest is International Business Machines Corporation, the assignee of the present Application.

II. Related Appeals and Interferences

U.S. Application SN. 09/213,588, Scott A. Morgan et al., filing date: 12/16/98.

III. Status of Claims

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

There are 12 claims in this Application.

B. STATUS OF ALL THE CLAIMS

1. Claims cancelled: Claims 4, 9, and 14.
2. Claims withdrawn from consideration but not cancelled: None.
3. Claims pending: None.
4. Claims allowed: None.
5. Claims rejected: Claims 1-3, 5-8, 10-13, and 15.

C. CLAIMS ON APPEAL

Claims on appeal: Claims 1-3, 5-8, 10-13, and 15.

IV. Status of Amendment

Claims 1-15 were in the filed Application.

Claims 1 through 15 in this Application were first rejected under 35 U.S.C. 102(b) in an Office Action mailed October 4, 2000.

Applicants filed an Amendment on January 5, 2001 which amended the claims to correct informalities, and traversed the rejection under 35 U.S.C. 102(b).

In a Office Action mailed March 22, 2001, the first rejection was withdrawn, and Claims 1-15 were rejected in a new rejection under sections 35 U.S.C. 102(b) and 103(a).

Applicants filed an Amendment on June 25, 2001 which amended the claims, and traversed the rejection.

The claims were finally rejected in a Final Rejection mailed September 13, 2001.

Applicants submitted an Amendment after Final Rejection filed October 12, 2001 which cancelled Claims 4, 9, and 14 and amended the claims to their present form.

An Advisory Office Action mailed October 23, 2001 entered the Amendment after Final Rejection but maintained the Final Rejection of Claims 1-3, 5-8, 10-13, and 15.

A first Appeal of the rejection of Claims 1-3, 5-8, 10-13, and 15 was filed on December 13, 2001.

A first Brief on Appeal was filed on January 23, 2002.

In an Office Action mailed April 4, 2002, prosecution was reopened, the first Final Rejection withdrawn, and Claims 1-3, 5-8, 10-13, and 15 were rejected under 35 U.S.C. 103(a) on the present grounds of rejection.

A Response was filed on June 18, 2002 traversing the rejection.

The claims were finally rejected in a second Final Rejection mailed August 27, 2002.

The present second Appeal of the rejection of Claims 1-3, 5-8, 10-13, and 15 was filed on November 25, 2002.

The present Brief is the Brief for this second Appeal.

V. Summary of Invention

The present invention is directed to speech recognition computer systems in which specified actions are performed on the computer controlled display in response to recognized specific spoken commands. The invention detects speech terms, i.e. non-commands which are not any of the specific commands directly recognizable by the system. These speech terms have similar meanings to any of the specified commands recognized by the system, and such speech terms could be reasonably spoken by a user trying to achieve the same results as a specified command. The present invention establishes means for determining whether such a non-command speech term may have relevance to one of the specified commands, and if such relevance is established, for then displaying the specified relevant command simultaneously with any normally recognized command. This gives the user the opportunity to easily select such relevant commands on an equal basis with the normally recognized commands.

VI. Issues

Whether Claims 1-3, 5-8, 10-13, and 15 are unpatentable under 35 U.S.C. 103(a) over Brant et al. (US Patent No. 5,970,457) in view of Morin et al. (US Patent No. 5,748,841).

VII. Grouping of Claims

All of the claims stand or fall together.

VIII. Argument

Claims 1-3, 5-8, 10-13, and 15 are unobvious under 35 U.S.C. 103(a) over Brant et al. (US Patent No. 5,970,457) in view of Morin et al. (US Patent No. 5,748,841).

The teaching of Brandt et. al.

While the system of Brant does detect and distinguish true commands from speech utterances which are not such commands, the reference makes no suggestion as to how such non-commands may be used for any advantageous purpose. The main purpose of Brant's distinguishing non-commands from commands is to minimize the effects of unintentional or casual speech upon the ability of the system to recognize true commands. The Brant reference does not suggest providing for each true command, an associated set of relevant speech terms which are not commands or simultaneously displaying both the recognized true commands as well as the true commands for which a relevant associated speech term was recognized.

In effect, Brant discards any speech terms which are not recognized commands. Thus, while Brant may display the recognized true commands, it in no way suggests the additional simultaneous display of commands associated with recognized non-command speech terms. The Examiners also concedes this point:

> "Brant does not specifically teach associating non-command speech terms with an associated command and displaying relevant commands based upon the non-command speech term." (bottom of page 4, Office Action)

Morin et al. does not make up for deficiencies of Brant

The Examiner relies on the Morin patent to make up for these deficiencies of the Brant reference. However, Morin's teaching is too complex to offer one skilled in the art any

insight into or suggestion of Applicants' invention. Morin et al. relates to a complex process for heuristically teaching a user the command languages of computer operating systems as well as programming applications for such systems through spoken user input and feedback from the system.

The present invention is not heuristic; it does not teach itself anything. The associated relevant non-command speech terms are not developed by the system but are provided by the user. The Examiner fails to specifically point out where in Morin's elaborate teaching of a heuristic speech recognition system is there a suggestion providing for the deficiencies of the Brant teaching. The primary portion of Morin pointed to by Examiner (Col. 19, line 20 - Col. 20, line 64) works interactively with users via displays to build commands. As the legal or true commands are being built, the user gets a menu of possible next words when he selects and enters each sequential word in the command phrase being built. Applicants fail to see how such a procedure suggests 1) providing for each true command, an associated set of relevant speech terms which are not commands or 2) simultaneously displaying both the recognized true commands as well as the true commands for which a relevant associated speech term was recognized.

About the only thing that Morin et al. has in common with the present invention is that both processes relate to translating spoken words into commands recognized by the voice recognition computer system. Beyond this common objective, Morin differs in that it does not suggest 1) providing for each true command, an associated set of relevant speech terms which are not commands or 2) simultaneously displaying both the recognized true commands as well as the true commands for which a relevant associated speech term was recognized.

Applicants submit that the mere common objective with Morin et al. of translating spoken words into commands recognized by the voice recognition computer system should not be sufficient to render the present invention obvious over Morin et al. or Morin et al. in combination with Brant et al.. It is submitted that there are many patents directed to this common objective of translating spoken words into commands recognized by the voice recognition system. Toward this common objective, the present invention offers a process which is much simpler than the heuristic process of Morin. That simplicity alone should not render it obvious over Morin et al., or Morin et al. in combination with the basic Brant reference.

The suggestion for combining the Examiner selected elements from Morin et al. with the Examiner selected elements of Brant et al. does not come from the references but from Applicants' own teaching.

It is submitted that the combination of the Brant et al. and Morin et al. references is being made not with the requisite foresight of one skilled in the art, but rather with the hindsight obtained solely by the teaching of the present invention. This approach cannot be used to render Applicants' invention unpatentable.

However, even if this combination of references could be made, there would still not be a suggestion of the combination of the claimed invention: 1) providing for each true command, an associated set of relevant speech terms which are not commands or 2) simultaneously displaying both the recognized true commands as well as the true commands for which a relevant associated speech term was recognized.

Request that Provisional Double Patenting Rejection be held in Abeyance until allowable common patentable subject matter be found.

With respect to the provisional rejection of the claims based upon obvious type double patenting over the combination copending Application SN. 09/213,858 in view of Morin et al., the Examiner indicated that this rejection will be withheld until conflicting claims are found to be allowable. Since, there is a common assignee of the cited application and the present application, assignee is prepared to submit any appropriate terminal disclaimer upon allowance of claims.

IX. Conclusion

Accordingly, Claims 1-3, 5-8, 10-13, and 15 are submitted to be patentable under 35 U.S.C. 103(a) over Brant et al. (US Patent No. 5,970,457) in view of Morin et al. (US Patent No. 5,748,841). It is respectfully requested that the Final Rejection be reversed, and that Claims 1-3, 5-8, 10-13, and 15, all of the remaining claims in the present patent application be found to be in condition for allowance.

Respectfully submitted,

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APPENDIX

Claims on Appeal

1. An interactive computer controlled display system with speech command input recognition comprising:

means for predetermining a plurality of speech commands for respectively initiating each of a corresponding plurality of system actions,

means for providing for each of said plurality of commands, an associated set of non-command speech terms, each term having relevance to its associated command,

means for detecting speech command and non-command speech terms,

means responsive to a detected speech command for displaying said command, and

means responsive to a detected non-command speech term having relevance to one of said commands for displaying the relevant command simultaneously with said detected speech command.

2. The system of claim 1 further including interactive means for selecting a displayed command to thereby initiate a system action.

3. The system of claim 2 wherein said means for selecting said displayed command include speech command input means.

5. The system of claim 3 further including:

a plurality of speech terms used in connection with specific actions of the system, and

wherein said means for providing said associated set of speech terms include:

a stored relevance table of universal speech input commands and universal computer operation terms conventionally associated with actions initiated by said input commands, and

means for relating said plurality of speech terms used in connection with specific actions of said system with commands in said relevance table.

6. A method for providing speech command input to an interactive computer controlled display system with speech command input recognition comprising:

predetermining a plurality of speech commands for respectively initiating each of a corresponding plurality of system actions,

providing for each of said plurality of commands, an associated set of non-command speech terms, each term having relevance to its associated command,

detecting speech command and non-command speech terms,

displaying a speech command responsive to its detection as a speech command, and

responsive to a detected non-command speech term having relevance to one of said commands displaying the relevant command simultaneously with said detected speech command.

7. The method of claim 6 further including the step of interactively selecting a displayed command to thereby initiate a system action.

8. The method of claim 7 wherein said selecting of said displayed command include speech command input means.

10. The method of claim 8 further including the step of:

providing a plurality of speech terms used in connection with specific actions of the system, and

wherein said step of providing said associated set of speech terms includes:

storing a relevance table of universal speech input commands and universal computer operations terms conventionally associated with actions initiated by said input commands, and

relating said plurality of speech terms used in connection with specific actions of said system with commands in said relevance table.

11. A computer program having program code included on a computer readable medium for speech command input recognition in an interactive computer controlled display system comprising:

means for predetermining a plurality of speech commands for respectively initiating each of a corresponding plurality of system actions,

means for providing for each of said plurality of commands, an associated set of non-command speech terms, each term having relevance to its associated command,

means for detecting speech command and non-command speech terms,

means responsive to a detected speech command for displaying said command, and

means responsive to a detected non-command speech term having relevance to one of said commands for displaying the relevant command simultaneously with said detected speech command.

12. The computer program of claim 11 further including interactive means for selecting a displayed command to thereby initiate a system action.

13. The computer program of claim 12 wherein said means for selecting said displayed command include speech command input means.

15. The computer program of claim 13 further including:

a plurality of speech terms used in connection with specific actions of the system, and

wherein said means for providing said associated set of speech terms include:

a stored relevance table of universal speech input commands and universal computer operation terms conventionally associated with actions initiated by said input commands, and

means for relating said plurality of speech terms used in connection with specific actions of said system with commands in said relevance table.